

Preparing the audio in a VOB file for the encoding process – PAL

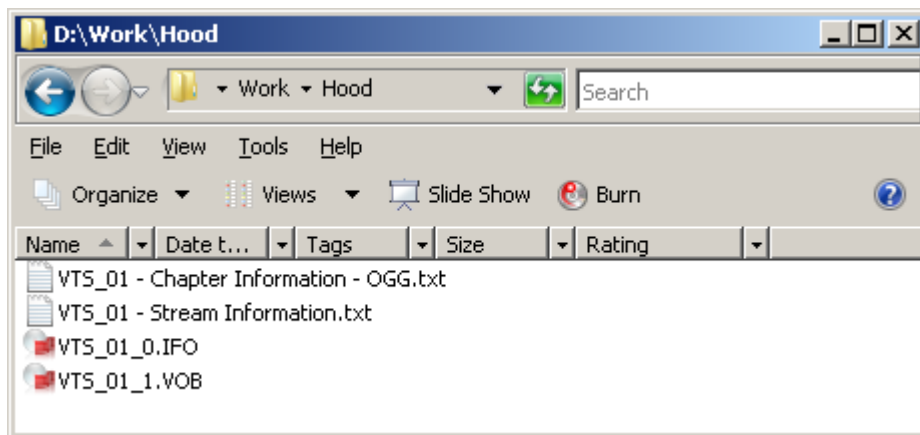
In this chapter we are going to look how to prepare the audio in a VOB file so we can use it for the encoding process.

This particular guide is for PAL-format DVD Audio only. NTSC-format DVD Audio needs fewer steps and will be discussed in a separate chapter.

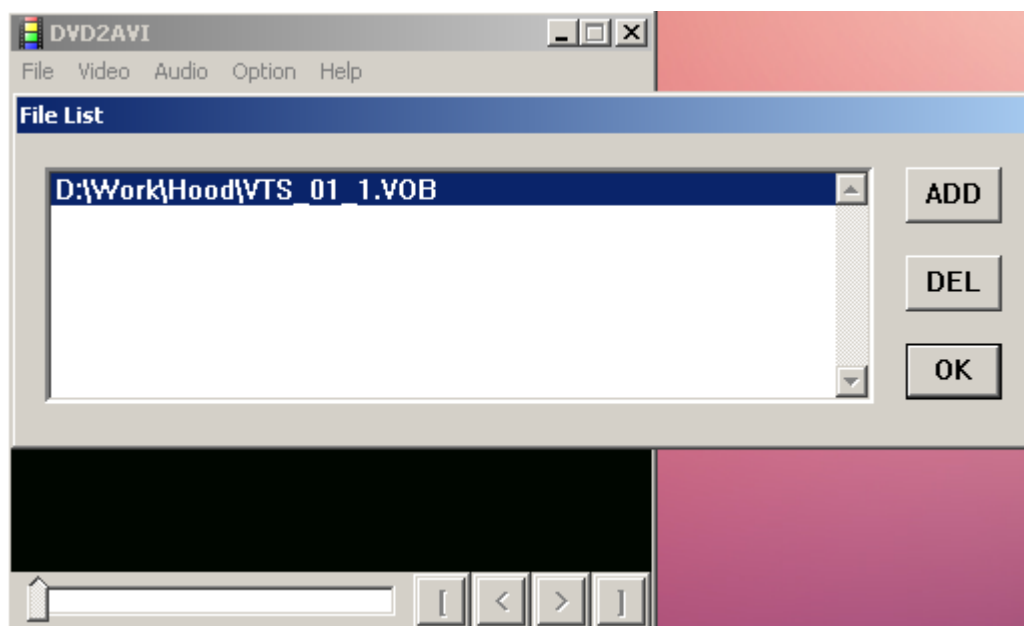
We need the following tools:

- DVD2AVI
- VirtualDub

Let's look at the files we have after copying the DVD to your hard disk:

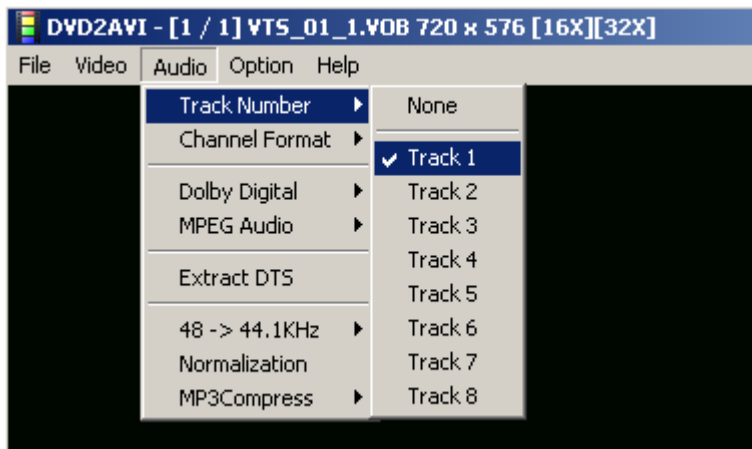


The audio track(s) we need are contained in the VOB file. We will use DVD2AVI to extract them. Start DVD2AVI and load the VOB file via the menu **File->Open** or by pressing **F3**, select the VOB file and click **Open**.



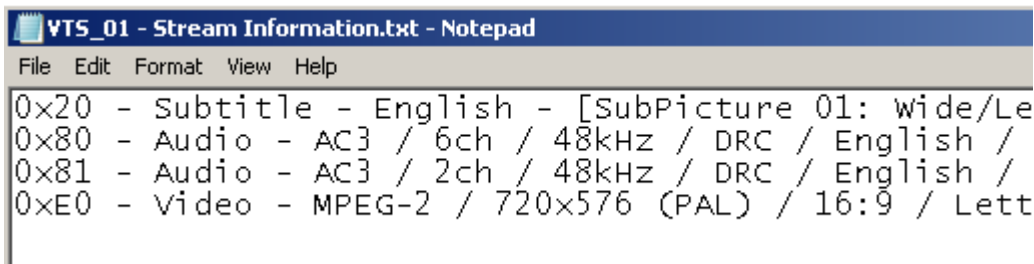
Then click **OK**.

We can select the required audio track from the Audio menu.



But first we will need to know which of these 8 tracks we need to select. This is where the Stream Information text file that we obtained during the decrypting/copy process comes in handy.

Let's open it and have a look.



You can see there are two audio tracks in the VOB file. Both are English language tracks. The first is a 6 channel (5.1) AC3 track, which is the main audio track. The other is a 2 channel (2.0) AC3 track, which in this example is a commentary track. There are no other audio tracks.

You can see the audio tracks are 'labeled' 0x80 and 0x81. With the following table you can determine which track to select in DVD2AVI:

0x80	Track 1
0x81	Track 2
0x82	Track 3
0x83	Track 4
0x84	Track 5
0x85	Track 6
0x86	Track 7
0x87	Track 8

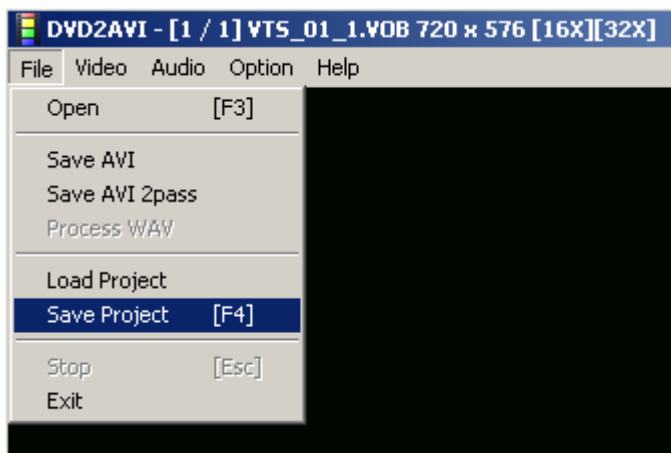
Pretty straight forward right? So why do I mention this? Because unlike what you see in this example, audio tracks are not always sequentially numbered. 0x80 (Track 1) does usually exist but a second track doesn't necessarily need to be 0x81. It could as well be 0x85, in which case you would need to select Track 6. That's why it is useful to always have a look in the **Stream Information** file. The same is true for the subtitle tracks, but we will see that in another chapter.

So in this example we need to select **Track 1** as I'm going for the English language track. If you want to use both then you can do Track 1 first and then repeat the whole process for Track 2.

There are no other settings you need to change in DVD2AVI for the audio tracks.

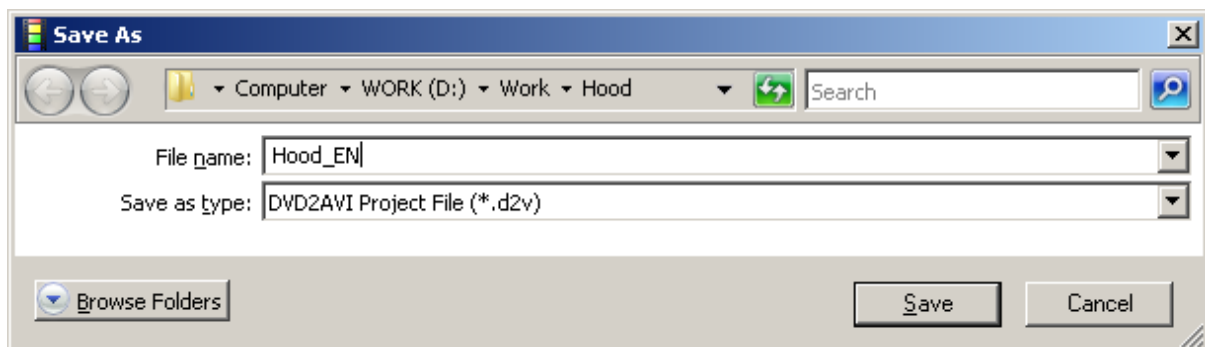
After we have selected the track number we can start extracting the track.

We can start the process simply by choosing **Save Project** from the **File** menu or by pressing **F4**.

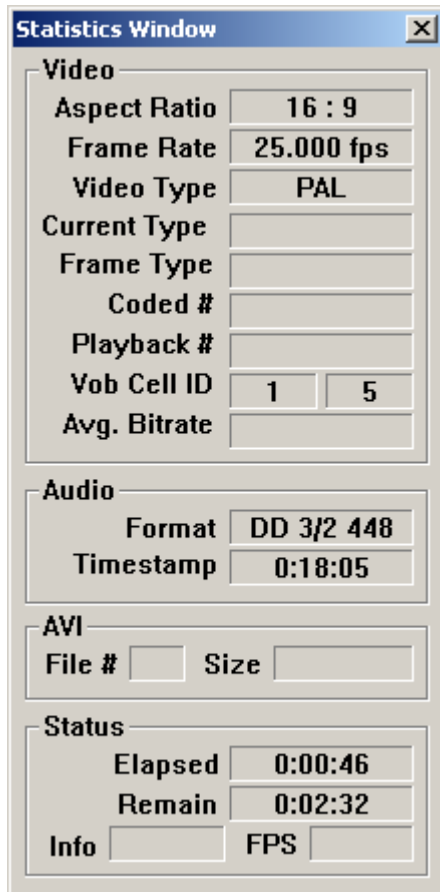


It requests you to enter a filename. Do not choose anything complicated. I usually give it the same name as the folder I'm working from, in this case Hood, plus a tag that tells me what language audio track it is. So the filename I chose here is **Hood_EN**

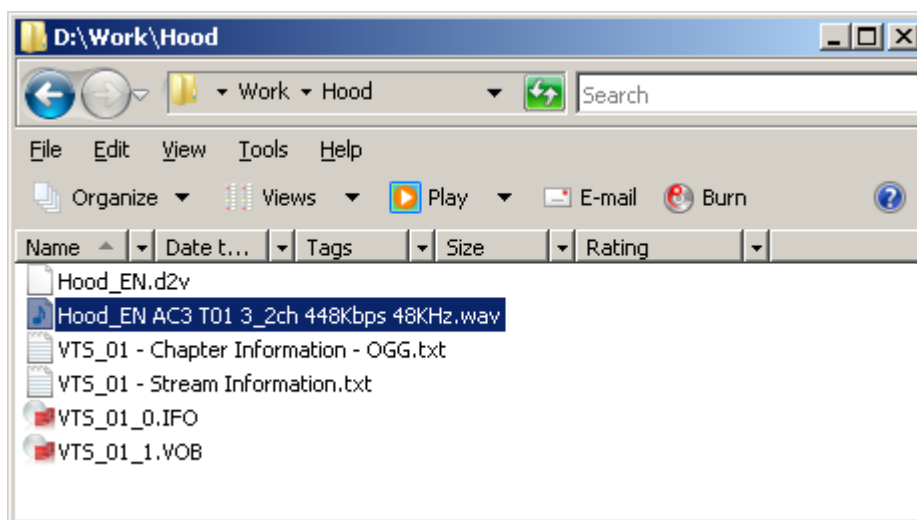
If I extract the commentary track as well I'll add the tag **_CT**.



Click **Save** and the processing will start. This can take a few minutes and progress can be followed in the statistics window:



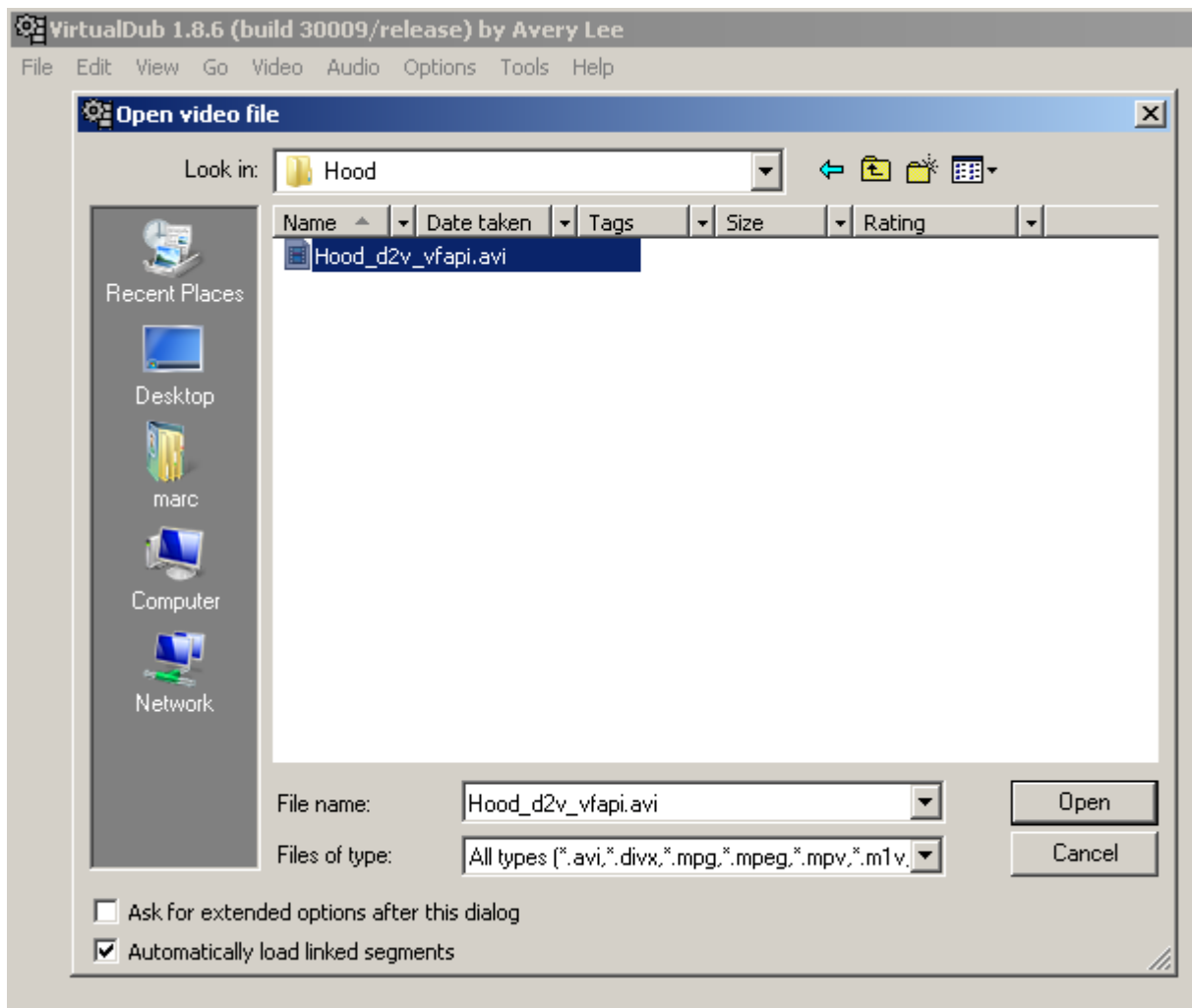
The result will be a WAV file that contains the movie's audio track and a [filename].D2V file.



Repeat these steps for every audio track that is in the VOB file that you want to use. Delete all but one (the original) of the .D2V files. I will not discuss the why and how of the .D2V file here, please see the chapter on preparing the video for encoding for that.

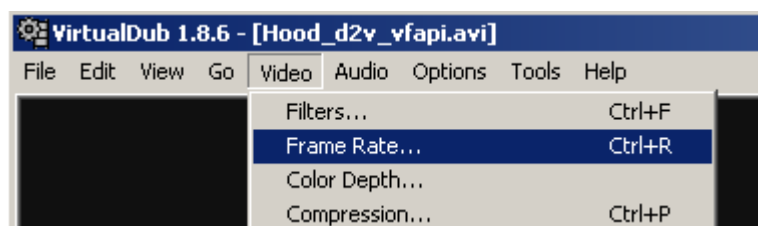
If this were a NTSC DVD then we would be done now. For PAL we need to do some extra steps as the frame rate is 25 fps instead of the needed 23.976 fps. So we will need to convert the audio track.

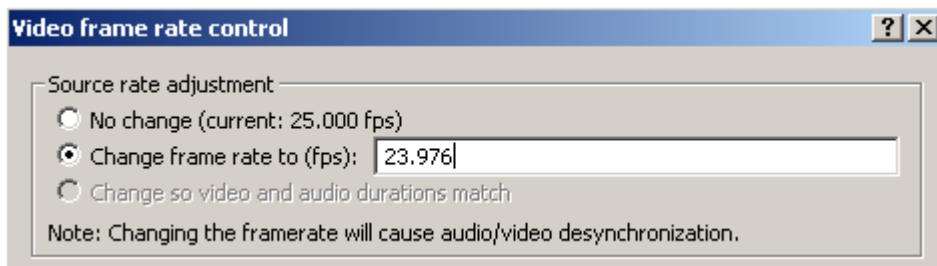
This conversion will be done with VirtualDub, so let's start it. After starting it select **File->Open**. Then find and select the **[filename]_d2v_vfapi.avi** file that was created during the preparation of the video; see that chapter for more information. After that click **Open** to load the file into VirtualDub.



The movie is loaded. We need to load the movie because otherwise one of the menu functions we need will be grayed out. It will also sync the audio with the video.

After loading the movie we first have to set the correct frame rate. Go to the **Video->Frame Rate...** menu.

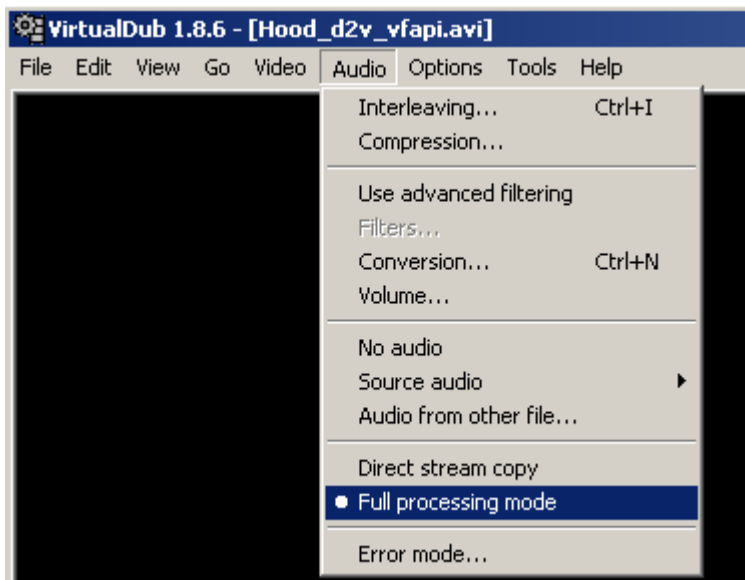




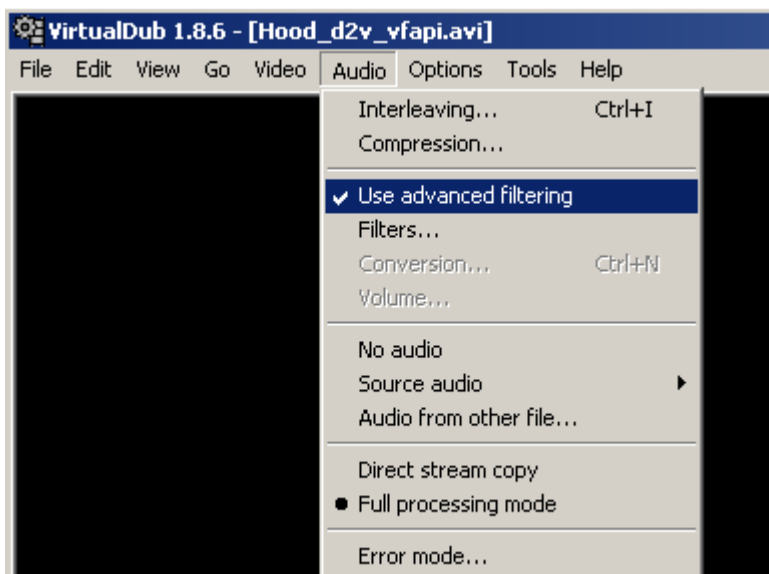
Select **Change frame rate to (fps)** and enter the value **23.976**, then click **OK**.

There are no other settings in this menu that need to be changed.

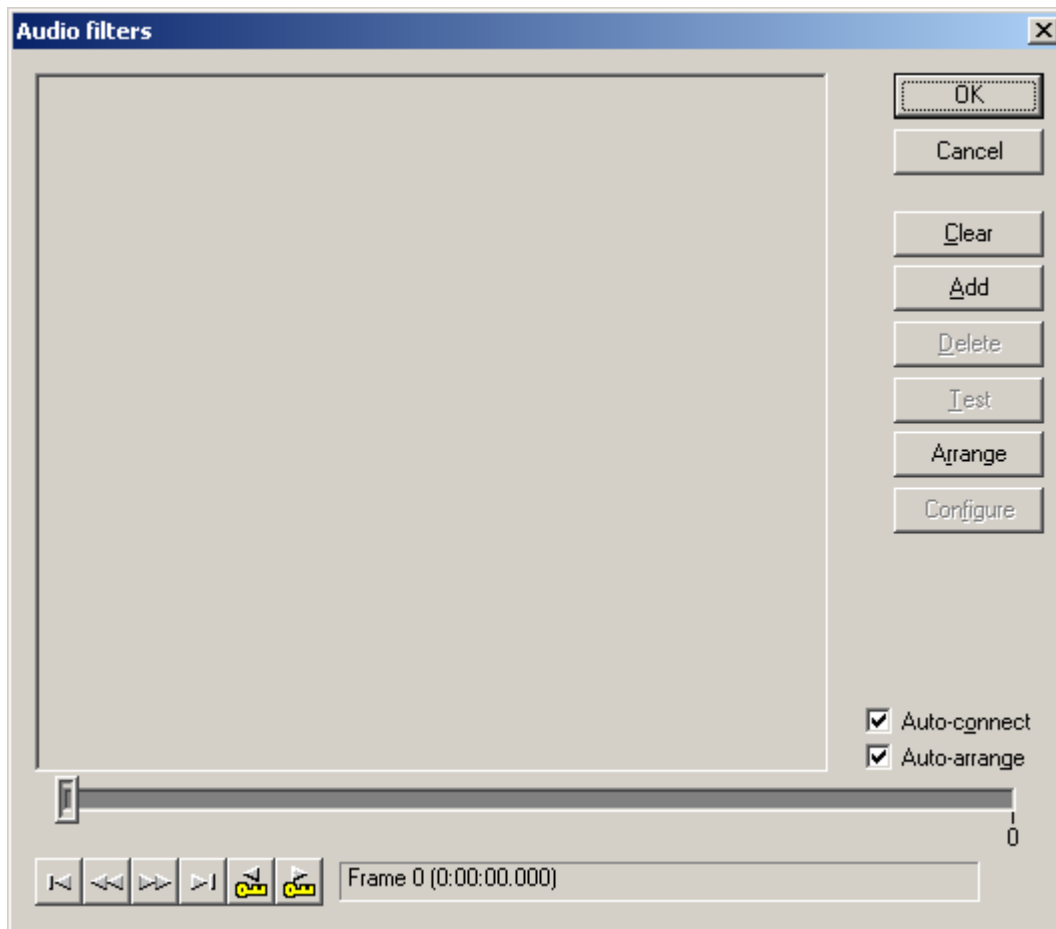
Now we are ready to start converting the audio track. First we need to change some settings. Go to the **Audio** menu and select **Full processing mode**.



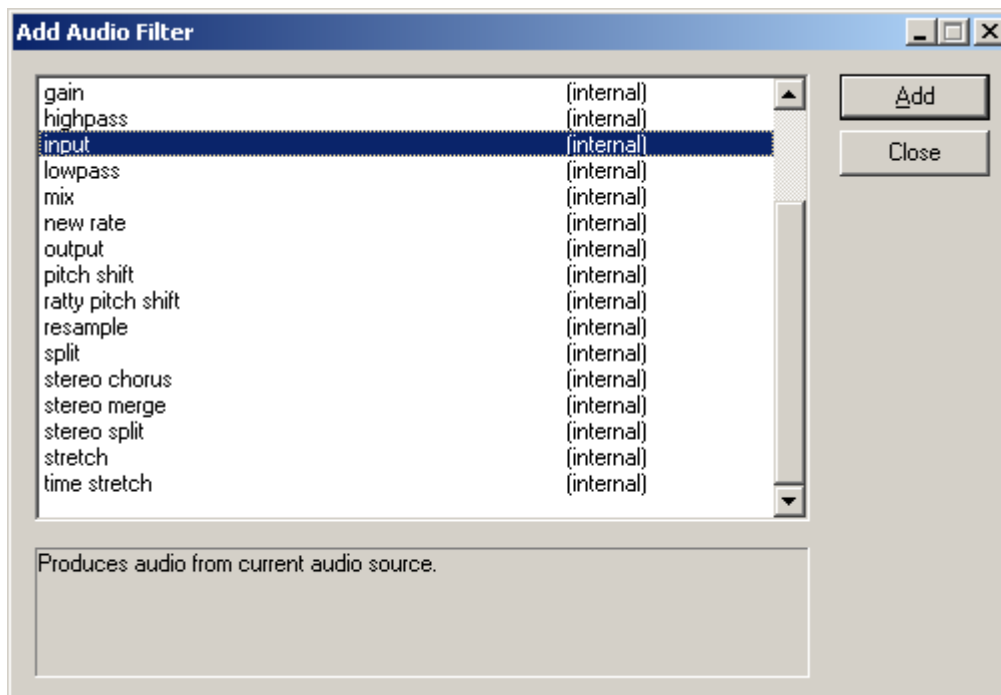
Next select **Use advanced filtering** in the **Audio** menu; this will enable the **Filters...** menu option.



Select **Audio->Filters...** A new window, **Audio filters**, will open.

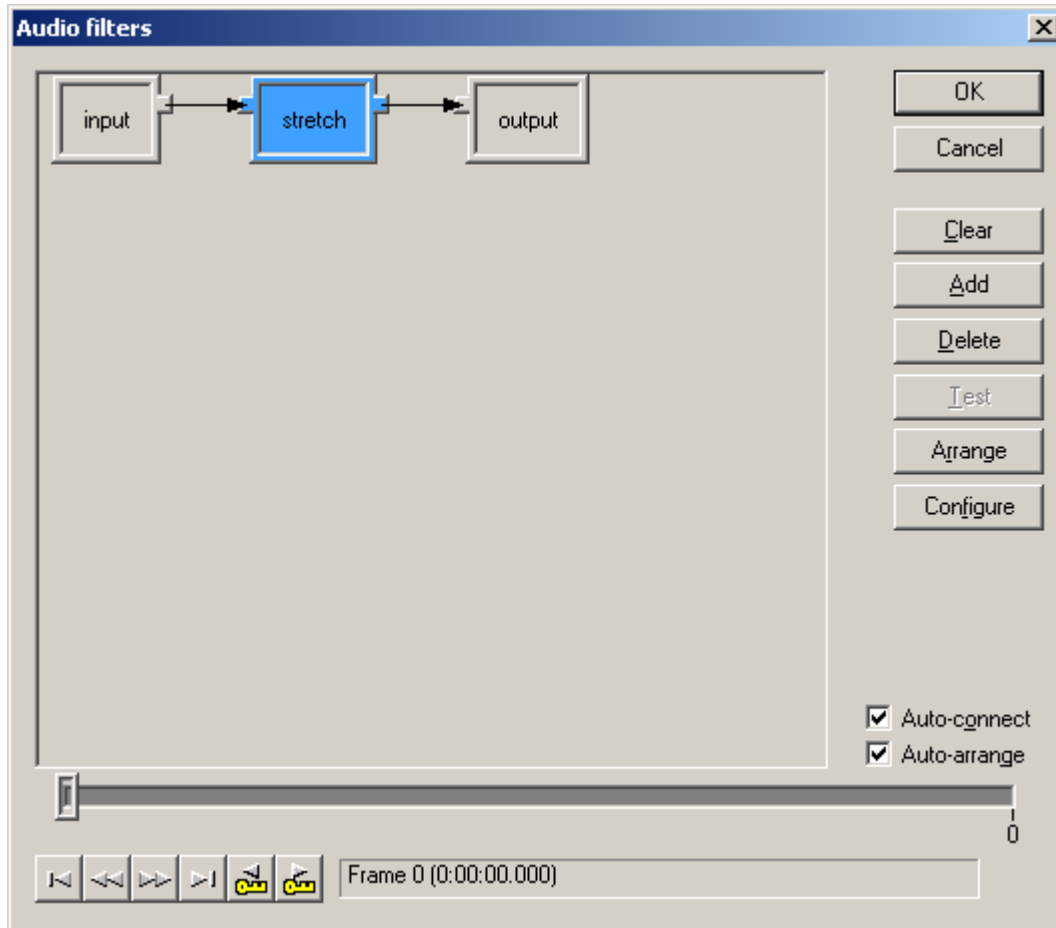


Click **Add** and a second window will open.

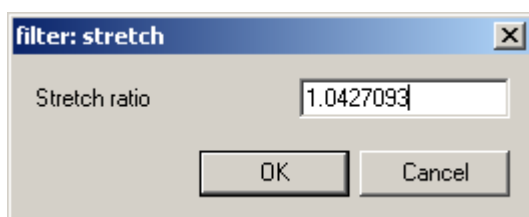


In the following order, select from the list: 1. **Input** 2. **Stretch** 3. **Output**
Then click **Close**.

You will see these items appear in the **Audio filters** window.



Double click **stretch** and another little window with a single field will open. Enter the value **1.0427093**, and then click **OK**.

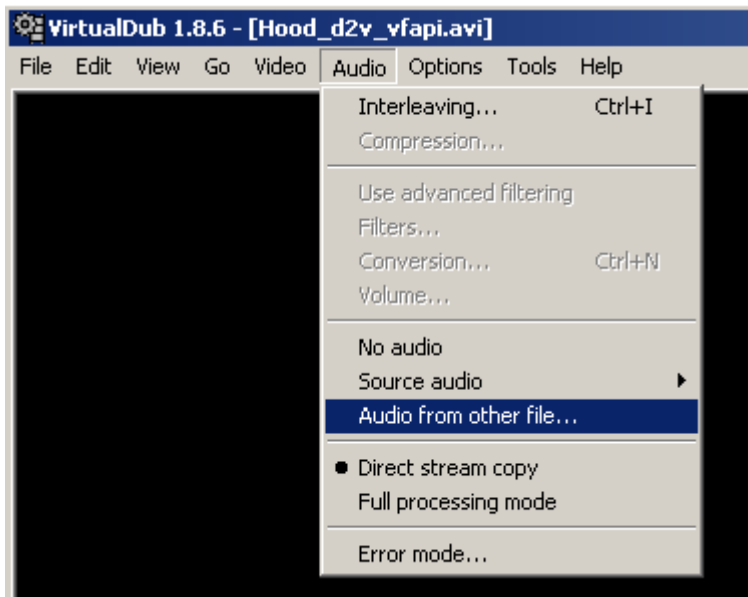


Click **OK** again to close the **Audio filters** window.

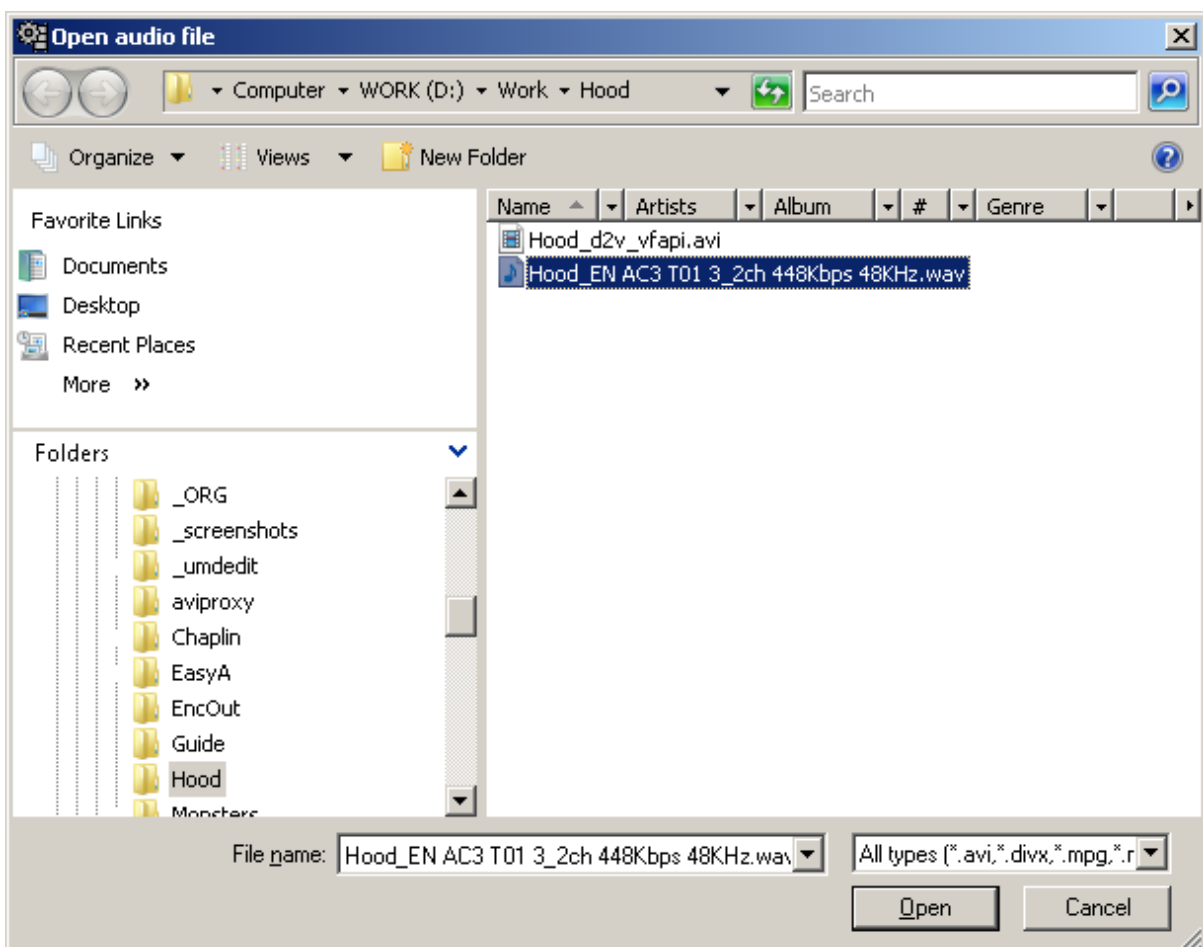
The value we added is the conversion ratio to get from 25 fps to 23.976 fps. It can be calculated by dividing 25 by 23.976. Basically what we're doing is 'stretching' the audio track so it will fit the already converted video. You will see after the conversion that the running time of the converted track has increased by several minutes (total number depending on the length of the movie) as opposed to the running time of the original track.

Now the settings are done and we can go ahead and convert the track. We will first load it.

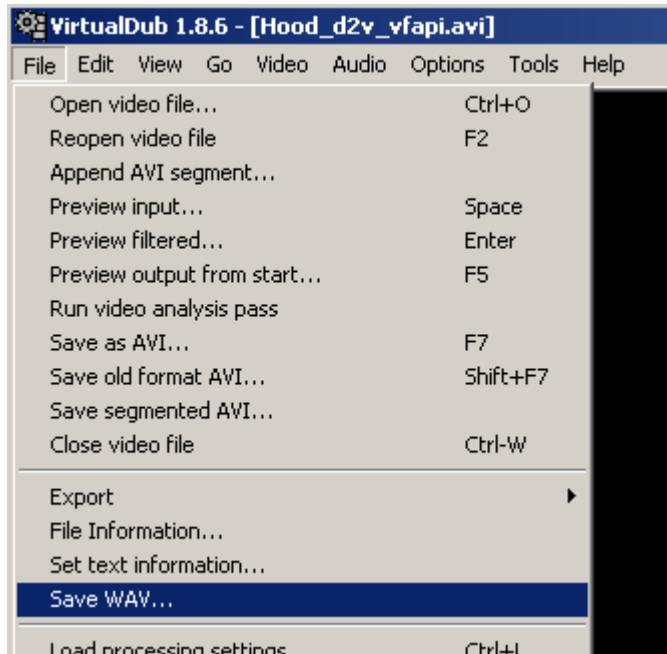
Select **Audio from other file...** in the **Audio** menu



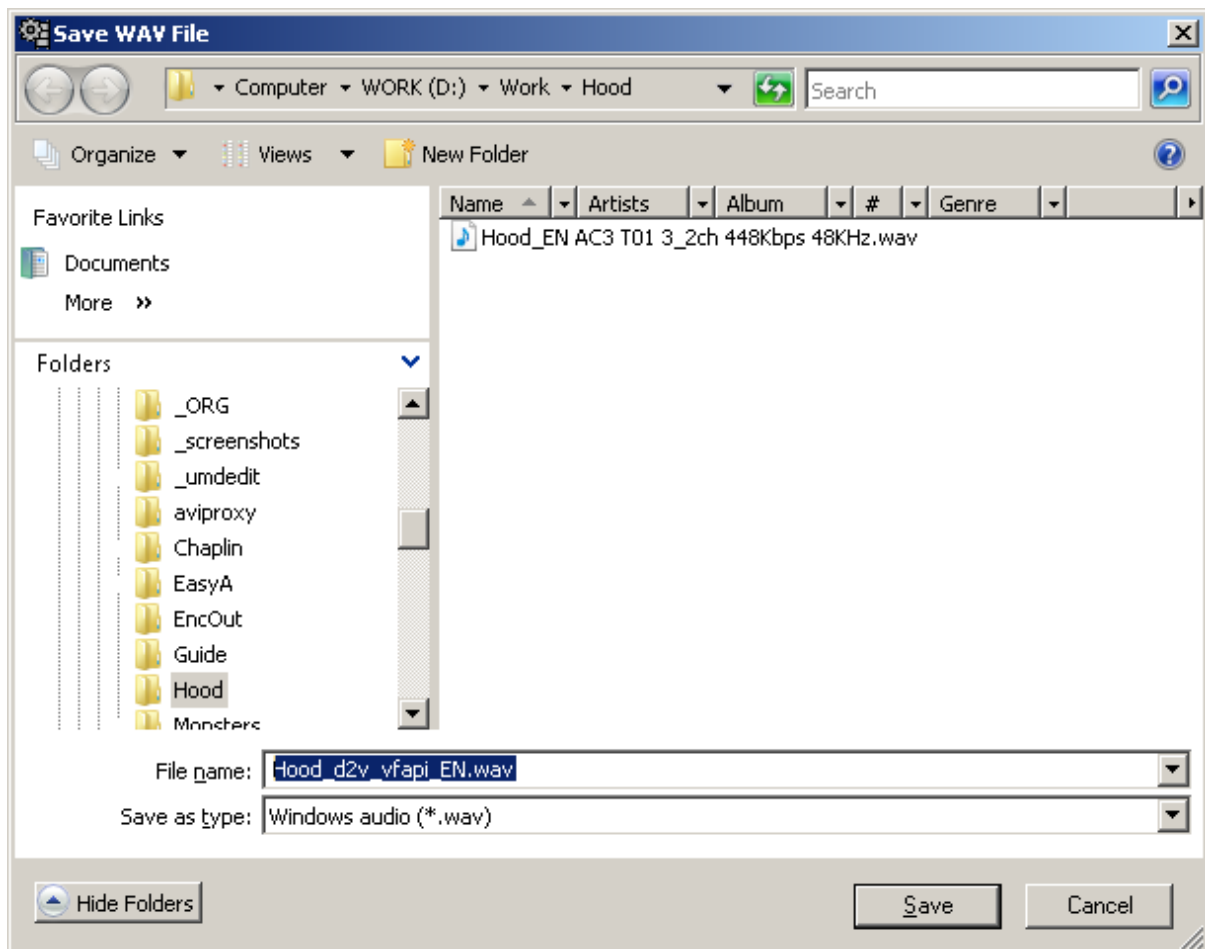
Select the WAV file that was created by DVD2AVI and click **Open**.



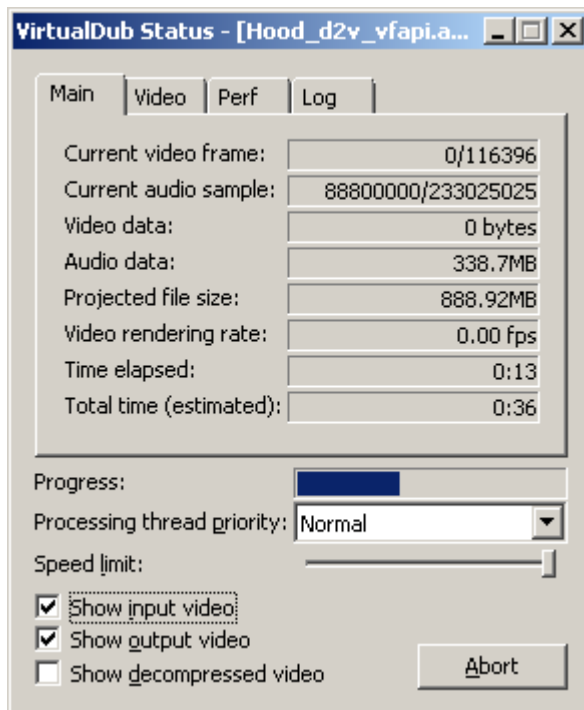
The window will close again. Next click **Save WAV...** in the **File** menu



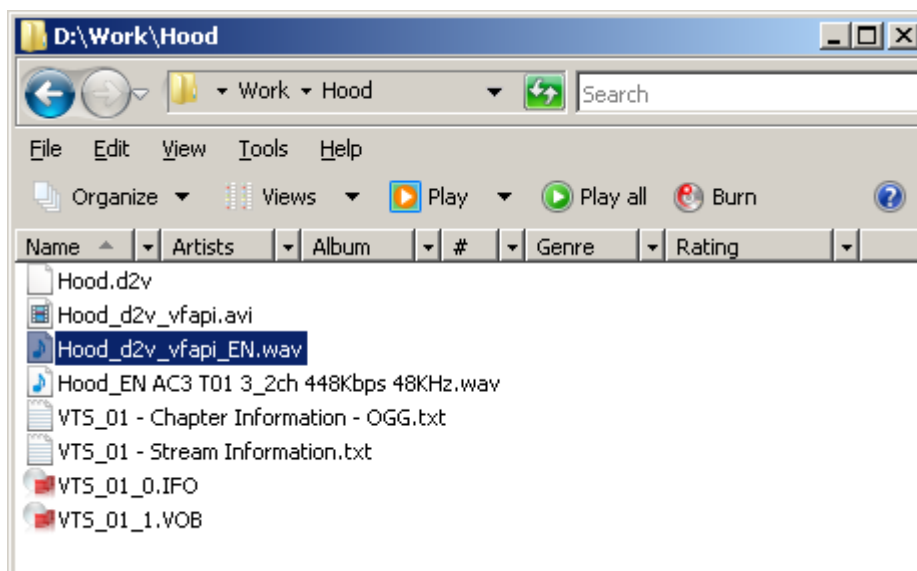
Think of a suitable name for the file and click **Save**. I just added **_EN** to the given default name.



The audio file will now be converted and saved as a file with the name you just entered. While the conversion is happening a status window is shown. When this window closes the conversion is done.



You will find the converted file in your work folder



This WAV file will later be used as source in Composer.

If you have multiple audio tracks then simply repeat the last two steps.

- Audio from other file...
- Save WAV...